

Page 3
No. 450.221US1
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11. A personal computer system comprising:

a processor;
a bus;
main memory;
a system controller;
a graphics controller;
a video source capable of providing a digital YUV video signal;
a video output capable of connecting to a video display device; and
a digital processor that applies gamma correction to the digital YUV signal provided by the video source and provides a corrected signal to the video output.

REMARKS

Applicant has carefully reviewed and considered the final Office Action mailed on August 16, 2000, and the references cited therewith.

Claim 2 is amended to correct a typographical error; no other claims are amended, cancelled, or added; as a result, claims 1-11 are now pending in this application.

Applicant respectfully requests reconsideration of the above-identified patent application as amended and in view of the following remarks.

§102 Rejection of Claims

The Examiner's withdrawal of 102 rejections based on prior art references Anderson et al. (U.S. 6,028,611) and Eglit (5,734,362) is noted with thanks.

Claims -10 were rejected under 35 U.S.C. 102(b) as being anticipated by Hannah (U.S. 5,568,192).

Hannah discusses a system and method for processing digital video signals in the RGB color space and then converting the processed signals to the YUV color space as needed (*see, e.g.* col 5 ln 54-60; col 6, ln 54-56). Hannah also discusses a variety of digital signal image processing including gamma correction, but teaches that this conversion must be performed in the RGB color space (*see, e.g.* col. 6, ln 29-56).

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In contrast, the present invention as claimed performs gamma correction and other video correction to digital video signals in the YUV color space and incorporates a digital processor that employs an algorithm that applies such correction to a digital YUV video signal. Further, the cited reference does not teach “a digital processor employing a corrective algorithm that applies gamma correction to the digital YUV signal” as claimed in claim 1, as the cited reference operates only on signals in the RGB color space.

The Office Action contends on p. 5 in response to these arguments that conversion in YUV rather than RGB is “merely a design choice” and does not distinguish the invention from the prior art. Applicant respectfully traverses this argument for rejection. The Examiner’s attention is drawn, for example, to the Background of the pending application, p. 2, lines 14-22 in which the need for and distinguishing features of YUV gamma correction (which is the same as YcrCb color space noted by the Examiner -- see, e.g., http://www.conexant.com/pressroom/whitepapers/pci_advantages/default.asp#37) are introduced. It is also particularly pointed out that none of the references teach gamma correction in the digital YUV color space, and none comprise the element “a digital processor employing a corrective algorithm that applies gamma correction to the digital YUV signal”. Although the present invention solves a problem similar to that solved in the cited references which may suggest RGB color correction, the present invention performs gamma correction in a structurally and functionally different way than any cited reference or combination thereof, and therefore is clearly patentably distinct from Hannah.

Because the cited reference does not teach gamma correction of a digital signal in YUV color space as is recited in the claims of the present invention, reexamination and allowance of the pending claims 1-10 is respectfully requested.

§103 Rejection of Claims

Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Eglit (U.S. 5,734,362) in view of Hannah et al. (U.S. 5,568,192) and further in view of Music (U.S. 5,739,861).

Applicant relies upon the arguments presented in response to the rejection of claims 1-10 with respect to Hannah in traversing this rejection.

Further, the Office Action states on p. 4, ln. 12-14 that Music discloses a system that first converts RGB values into digital RGB values and then gamma corrects, citing col. 6, ln. 4-7 of Music. Applicant respectfully points out that col. 6, ln. 4-7 of Music discloses gamma correction only in the camera itself, stating "TV cameras employ a non-linear correction called 'Gamma Correction' . . .", and fails to suggest correction of a digital signal or correction in the YUV color space.

Also, the cited references fail to teach or suggest combination of the references, and so such combination is improper as explained in MPEP 2143.01 and 2145.

Because the cited references are not properly combinable and any combination of the cited references still fails to anticipate the element "a digital processor that applies gamma correction to the digital YUV signal. . ." as recited in claim 11, this claim is patentably distinct from the cited references. Reexamination and allowance is therefore respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-349-9581) to facilitate prosecution of this application.

AMENDMENT & RESPONSE UNDER 37 C.F.R. § 1.116 - EXPEDITED PROCEDURE

Serial Number: 09/217,873

Filing Date: December 21, 1998

Title: DIGITAL YUV VIDEO EQUALIZATION AND GAMMA CORRECTION

Page 6

Dkt: 450.221US1

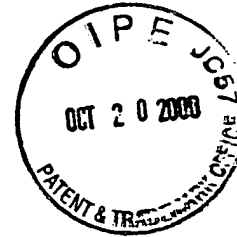
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Respectfully submitted,

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By their Representatives,

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